MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2019/2020

DMA5018 – MULTIMEDIA APPLICATIONS

(For Diploma students only)

16 OCTOBER 2019
09:00 a.m. – 11:00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **6 pages.**
2. Answer **ALL** questions in **Section A** and **Section B** on the **Answer Booklet.**

SECTION A: 20 MULTIPLE CHOICE QUESTIONS (10 MARKS)

*Instruction: Write your answers in the **Answer Booklet.***

1. A _____ is a family of graphic characters, often with many type sizes and styles.

   A. font
   B. text
   C. data
   D. typeface

2. Placing an uppercase letter in the middle of a word, called a/an _____.

   A. intercap
   B. intercase
   C. camelcap
   D. camelcase

3. _____ is the simplest of data types and requires the least amount of storage.

   A. Data
   B. Text
   C. Number
   D. Character

4. The _____ is the little decoration at the end of a letter stroke.

   A. text
   B. serif
   C. san serif
   D. character

5. Which of the following process **BEST** describes for statement below?

Converting the letter $\mathcal{A}$ from a mathematical representation to a recognisable symbol displayed on the screen or in printed media.

   A. Pixelate.
   B. Analysing.
   C. Rasterizing.
   D. WYSIWYG (What You See Is What You Get).

Continued.....

6. A _____ is a simple matrix of the tiny dots that form an image and are displayed on a computer screen or printed.

   A. bit
   B. pixel
   C. bitmap
   D. pixelate

7. A 16-bit colour, can display as many as _____ colours.

   A. 128
   B. 256
   C. 32,768
   D. 65,536

8. _____ is a visual quality in which a distant image or element can be seen through a nearer one.

   A. Art
   B. Visualise
   C. Brightness
   D. Transparency

9. Vector drawn objects are used for all the following **EXCEPT**.

   A. Lines
   B. Curve
   C. Polygons
   D. Photograph

10. Which of the followings are ways to generate bitmaps image?

    I. Scratch with a paint or drawing program.
    II. Take a photo through the camera or apps then select the cropping tool and save as image.
    III. Capture a bitmap from a photo or other artwork using a scanner to digitize the image.
    IV. Grab a bitmap from an active computer screen with a screen capture program.

    A. I and II
    B. I, II and IV
    C. II, III and IV
    D. All of the above

Continued.....

11. A blinking word, a colour-cycling logo, a cel animation or a button or tab that changes state on mouse rollover to let a user know it is active are all examples of which type of animations.

    A. 2-D space.
    B. 2½-D space.
    C. 3-D space.
    D. 4-D space.

12. _____ is an action that requires calculating the number of frames between keyframes and the path the action takes, and then actually sketching with pencil the series of progressively different outlines.

    A. Dithering
    B. Morphing
    C. Tweening
    D. Animating

13. _____ is the study of the movement and motion of structures that have joints.

    A. Joints
    B. Muscles
    C. Kinematics
    D. Animation principles

14. The system used for drawing vectors, where a pair of numbers describes a point in two-dimensional space as the intersection of horizontal and vertical lines, is called _____.

    A. rasterization
    B. hexadecimal
    C. texture mapping
    D. cartesian coordinates

15. An animation effect in which a still or moving image is transformed into another. This type of animation is called _____.

    A. morphing
    B. kinematics
    C. cel animation
    D. path animation

Continued.....

16. Several _____ area networks can be interconnected using gateways and routers to form a _____area network.

A. wide;local
B. local;wide
C. metropolitan;local
D. metropolitan;personal

17. _____ is used to format and deliver web pages using styles.

A. CSS
B. XML
C. Javascript
D. Cold Fushion

18. The _____provides rules for a simple transaction between two computers on the Internet.

A. Internet Protocol
B. Hypertext Transfer Protocol
C. Transmission Control Protocol
D. Simple Mail Transport Protocol

19. _____ are pictures with defined hot spots that link to other documents when a user clicks on them.

A. Graphic
B. Hand cursor
C. Image maps
D. Navigation maps

20. The _____ assigns names and addresses to computers linked to the Internet.

A. International Organization for Standardization (ISO)
B. Domain Name System (DNS)
C. Top-level Domains (TLDs)
D. Second-Level Domains

Continued.....

SECTION B: 4 STRUCTURED QUESTIONS (40 MARKS)

*Instruction: Write your answers in the **Answer Booklet**.*

QUESTION 1 (10 MARKS)

a) Identify each font terminology in figure 1 below: [3.5 marks]

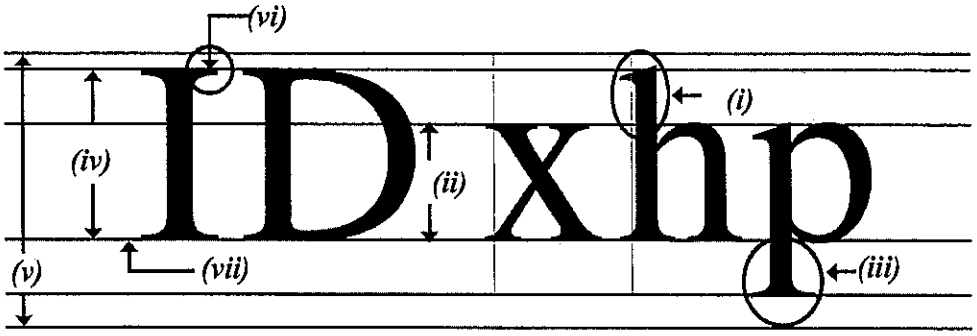

Figure 1 : Font Terminology

b) What is character set? List and briefly explain **THREE (3)** types of character sets. [3.5 marks]

c) Briefly explain the **THREE (3)** features of 3-D modelling application. [3 marks]

QUESTION 2 (10 MARKS)

a) Define animation. [2 marks]

b) As a web developer point of view, explain **THREE (3)** basic ways on how to design an effective multimedia project for the web. [3 marks]

c) Discuss **FIVE (5)** ways to avoid bandwidth bottleneck. [5 marks]

Continued.....

QUESTION 3 (10 MARKS)

a) Discuss **FIVE (5)** characteristics digital audio. [2.5 marks]

b) Briefly describe the four technical characteristics that determine the size of a digitized audio file. [2 marks]

c) Discuss **SIX (6)** process to follow in adding sounds in multimedia project. [3 marks]

d) Calculate the audio file size in megabyte (MB) for stereo digital recording, 3.75 minutes recording at 44.1 kHz and 2 bytes resolution. [2.5 marks]

QUESTION 4 (10 MARKS)

a) Briefly explain analog video and list **THREE (3)** analog broadcast video standards commonly in use around the world. [3 marks]

b) There are several video standards for managing analog CCD (charge-coupled device) output, each dealing with the amount of separation between the components. List **THREE (3)** analog signal output and identify which are the lowest in quality. [2 marks]

c) A video stream with 30 frames per second playback rate and an audio stream of stereo voice channel. If each frame consists of 640 X 480 pixels of 24 bits colours depth and the audio is sampled at 44,100 Hz with 2 bytes sampling. Calculate the total storage required in gigabytes to store the above video file for ten minutes. [5 marks]

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